

BACKCOUNTRY MANAGEMENT PLAN

August 1983

GRAND CANYON NATIONAL PARK
ARIZONA



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National Park Service/Department of the Interior

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OPERATING PROCEDURES

A. Visitor Use Limits, Zoning and Designated Sites, Area Closures, and Length of Stay
B. Trail Patrol Procedures
C. Backcountry Reservation and Permit System
D. Backcountry Commercial Use Policy
E. Private Livestock Use
F. Backcountry Sign and Trail Marking Policy
<u>MAP</u>

A. Introduction.

The plan is divided into two sections. First, general concepts and policy are presented which will guide management of backcountry use for a five year period. Second is the operating procedures which contain a detailed description of procedures that are subject to change on a more frequent basis. These sections are to be used together by the visitor and the National Park Service staff for a full understanding of backcountry management at Grand Canyon. This format and an annual review of backcountry operations will allow the document to be responsive to change and act as a useful daily reference for park management.

The plan calls for a backcountry research and monitoring program to collect baseline ecological data and to measure resource and sociological impacts and visitor use patterns. The results of this program will be used with the annual plan review to provide for updating of the plan's operational elements.

To best serve the backcountry visitor in comfortably and conveniently obtaining backcountry use permits and information, and to improve management of the permit and reservation system, the Backcountry Reservations Office (BRO) will be moved to a new and larger location in the near future when funding becomes available.

Successful management of backcountry areas at Grand Canyon depends on timely and complete backcountry visitor use statistics. At present visitor use statistics are collected manually with periodic computer generated summaries. In-park automation presents a faster, more efficient and useful system. It is the intention of the park to fully automate this system as soon as practical.

B. Management Goals and Objectives.

The 1976 Master Plan for Grand Canyon National Park identified the protection and maintenance of natural conditions and a primitive atmosphere as management objectives for backcountry lands. It provided for undeveloped portions of the rim areas and the inner-canyon, over 1,179,700 acres (96 percent of the total park area), to continue to be managed to maintain this character.

The long-range goals of backcountry management at Grand Canyon National Park are (1) to maintain and perpetuate the natural ecosystem processes at work in the park's backcountry, (2) to protect and preserve important historic and prehistoric cultural resources, and (3) to provide and promote a variety of backcountry recreational opportunities for the greatest number of visitors compatible with resources protection and visitor safety.

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Through this plan the National Park Service intends to stabilize backcountry use at recent historic levels and provide the backcountry hiker with an opportunity for a wide variety of backcountry recreation opportunities, with greater assurance that once in the backcountry the experience chosen will be realized. Actions under this plan may also promote a more even distribution of use throughout the year in backcountry areas outside the Cross-canyon Corridor.

Actions to achieve the plan's objectives include the following: the division of the backcountry into use-areas; zoning of all backcountry use-areas as either developed, threshold, primitive, or undeveloped; establishment of use limits for each area; implementation of a research and monitoring program; and mitigation of some impacts through site restoration and rehabilitation, educational programs, orientation, interpretation and law enforcement.

C. Legislation and NPS Policy.

The 1916 National Park Service Organic Act directs the National Park Service to regulate park use and promote enjoyment of park lands in a manner consistent with the conservation of park scenery, natural and historic objects, and wildlife. In order to fulfill these mandates, all resource planning activities must insure that: (1) public use facilities do not disrupt or damage resources to a degree whereby their ability to serve future visitors is reduced, (2) appropriate non-destructive public use and enjoyment of resources is made possible, and (3) conscious care and protection is provided to conserve natural and cultural resources. Thus, a program of backcountry management at Grand Canyon National Park must effectively protect and preserve park resources in the long term, including preservation of the primeval character of the park backcountry.

The Grand Canyon National Park Enlargement Act, January 3, 1975 (P.L. 93-620) provided for "...the further protection of the Grand Canyon in keeping with its true significance..." and established the current park boundary. This law incorporated Marble Canyon National Monument, Grand Canyon National Monument, portions of Lake Mead National Recreation Area and the Kaibab National Forest, as well as some Bureau of Land Management lands and other lands, into today's enlarged 1,226,656 acre national park.

Additional legislation and executive orders which influence backcountry management in the park include the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, the National Historic Preservation Act of 1966 as amended in 1980, Executive Order 11593, Executive Order 11987, the Federal Water Pollution Control Act Amendments of 1972, the Endangered Species Act of 1973 as amended in 1982, the Clean Air Act Amendments of 1977 and the National Park Service Administration Act of 1978.

The Wilderness Act of 1964 requires all Federal land-managing agencies to re-examine their resources for possible wilderness classification. In 1976 the National Park Service prepared a draft environmental impact statement which recommended five units (totaling 82 percent of the park) as wilderness. Following public review of the document, a recommendation was forwarded to the Department of the Interior. No action has yet been taken on this recommendation.

Little policy or operational change would occur if wilderness is designated at Grand Canyon. Except for river traffic, use of motorized equipment and vehicles below the rims is presently allowed only in emergency, safety, research, and maintenance situations. In all cases, the minimum tool is used to accomplish management objectives.

D. Land Classification.

The 1976 Grand Canyon National Park Master Plan classifies all land in Grand Canyon National Park into four categories: Development, Natural, Historic, and Special Use. This classification was designed to aid managers in determining operational and management needs. All backcountry lands managed under the master plan are classified as Natural, with the exception of the Cross-canyon Corridor which is classified as Development, Havasupai Traditional Use Lands which are classified as Special Use, and a portion of Horseshoe Mesa which is classified as Historic.

Six Research Natural Areas (totalling 8,845 acres) are located in the backcountry. These are designated as primary research areas and contain examples of significant natural ecosystems. These six areas are located at Neal Springs, Mount Emma, Powell Plateau, Swamp Point, Great Thumb, and Wayside. All of these areas are located in use-areas zoned as undeveloped within the Backcountry Management Plan classification system. If, based upon research and monitoring actions, the use limits imposed by the plan are shown to cause adverse impact to these areas, changes will be made in the levels or frequency of use.

Two Environmental Study Areas (ESA) have been designated on the Colorado River's south side. The Hermit Basin ESA along the Hermit Trail is centered around a geological theme. The Grandview ESA on the rim in the Grandview area deals with the theme of man's relationship to the biological world. These study areas, as defined in the Grand Canyon Master Plan, are not to be altered by development or management. They are to be available to school groups and teachers for purposes of field study. The Hermit Basin is classified within the backcountry plan classification system as a threshold zone, and the Grandview area is a developed zone. With such classifications and because both areas are designated for day use only, there is no potential conflict with use under the Backcountry Management Plan.

Havasupai Traditional Use Lands. The Grand Canyon National Park Enlargement Act of 1975 added 83,809 acres of park land to the Havasupai

Reservation and authorized grazing and other traditional uses on 95,300 acres of park land known as the Havasupai Traditional Use Lands (TUL). In 1982 the National Park Service and the Havasupai signed a "Memorandum of Understanding" on the tribal use and park management of these joint lands. Central to this memorandum is the establishment of rights-of-way for hikers.

Private Inholdings. There are roughly 29,000 acres of nonfederally owned land within Grand Canyon National Park. The National Park Service is attempting to acquire adequate interest in these lands to provide full protection of park resources.

E. Backcountry Zoning and Use-areas.

The backcountry is divided into use-areas. These areas are bounded by easily identifiable topographic features such as ridge tops and streams (refer to backcountry zone map). Each area has an overnight camping capacity based upon the size of the area, the number of suitable and available camping sites within the area, the ecological sensitivity of the area, its management zoning, and its use history (Refer to Figure I, page 6).

Use-area size ranges from several hundred acres to several thousand acres. The size, number, and boundaries of the use-areas are based upon established patterns of backcountry use. (Refer to Operating Procedure A for specific limits on overnight use and length of stay in the various use-areas.)

To better guide management actions in the backcountry, and to provide an opportunity for a wide variety of backcountry experiences, each use-area is zoned as developed, threshold, primitive, or undeveloped. Zoning will determine (1) the potential for contact with others within the use-area, (2) the amount and type of administrative or commercial development within the area, (3) the ease of access to the area, (4) the types of visitor use accepted within the area, and (5) the amount of visitor and administrative impact to be expected within the area.

As an example, Tanner Canyon is zoned as primitive. The area has no facilities and camping is at-large. On the other hand, Hermit Canyon, with a ranger station, designated campsites, and toilet facilities, is zoned as a threshold use-area. (Refer to Figure I, page 6, for zone descriptions.)

F. Visitor Use and Activities.

1. Use Limits. Use limits in all areas are maintained through permitting at the Backcountry Reservations Office (BRO). Use levels are established for at-large camping (defined as camping in non-designated sites) in some areas and by designated site camping in others. In use-areas with at-large camping, hikers are not required to give a night-by-night campsite itinerary. They are required to identify the use-area in which they will

camp each night and will be free to choose a campsite consistent with low impact camping guidelines. In the developed and threshold use-areas where designated campsites and campgrounds have been established, hikers must follow the night-by-night campsite itinerary as noted on the Backcountry Use Permit. For all other use-areas hikers may camp at-large but they must follow their use-area itinerary. In all use areas the only itinerary deviations permitted are those necessitated by illness, injury or extreme acts of nature.

Use levels will be based not on the total number of persons within the use-area or at a designated campsite but instead on the number of individual parties (defined as one through eight persons traveling together) and on the number of groups (defined as from nine to sixteen persons traveling together) allowed to camp in a use-area per night. The party/group system is intended to stabilize the extent of environmental impacts in some camp areas since people in a party usually camp as a unit, cook together, etc., while the same number of persons camped as individuals in the area will attempt to maximize distance between their camp spaces, thus extending the camp area perimeter.

The use levels listed in Operating Procedure A have been calculated by the following procedure. First, park records were used to determine recent historic backcountry use. Use was evaluated on a monthly basis. Second, each use-area was evaluated in terms of physical limitations to camping, the number of presently available campsites and potential resource sensitivity. A specific use limit (parties and groups) for each use-area was then calculated based upon past use and the aforementioned criteria. The number of parties and groups per use-area per night was determined based upon the fact that at Grand Canyon the average group size is 13 persons and the average party size is 3 persons. For example, the goal for the Tanner Use-area is for an average of 22 persons per night. This goal will be reached through a limit of three parties and one group per night. With all four permits issued, potentially a maximum of 40 persons or a minimum of 12 persons could be camped in the area. But the average number of campers per night will be 22. (Refer to Operating Procedure A for specific use levels and length of stay.)

All undeveloped use-areas have a use limit of two parties or one group per night. All primitive and threshold use-areas have use limits which vary from one to four parties per night and from one to two groups per night, depending on the area. All developed use-areas have a use limit based on the total number of campers as well as on the number of parties and groups. (Refer to Operating Procedure A.)

Use Limit Explanation for Selected Use-areas.

Corridor Campgrounds: Cross-canyon Corridor campground use limits are based upon the number of available sites within each

FIGURE I - BACKCOUNTRY ZONING

All use-areas are zoned as developed, threshold, primitive, or undeveloped and have specific use limits. Zone standards are described in this matrix, refer to page 4 for a description of zone management, and refer to Operating Procedure A for use limits and zoning of all backcountry areas.

USE ELEMENT: ZONING	AMOUNT OF PARTY/ PARTY CONTACT	AMOUNT AND TYPE OF NPS DEVELOPMENT	PUBLIC ACCESSIBILITY	CAMPING RESTRICTIONS
<u>DEVELOPED</u>	Potential for continuous contact. High density use.	Permanent structures for visitor safety and sanitation, administration, interpretation, and protection of resources; utilities and signs; bridges and trails.	Paved roads to trailheads; maintained foot and stock trails.	Designated campgrounds, required use of sanitary facilities.
<u>THRESHOLD</u>	Potential for frequent contact. Medium density use.	Nonpermanent structures for visitor safety, sanitation, and protection of resources; signs; dirt roads and trails.	Paved and dirt roads to trailheads; unmaintained foot trails and routes.	Designated sites in some areas; at-large camping in some areas; required use of available sanitary facilities.
<u>PRIMITIVE</u>	Infrequent contact. Low density use.	Signs, dirt roads and trails, fire lookouts and ranger cabins on rims.	Dirt roads to some trailheads; unmaintained foot trails and routes.	At-large camping.
<u>UNDEVELOPED</u>	Potential for no contact.	No development except pre-historic structures and abandoned historic structures.	Unmaintained foot trails and routes.	At-large camping. Two parties of 8 persons or one group (9-16 persons) only per night.

campground. Sites are well defined. Use in these campgrounds will be booked through the BRO on a party/group system, similar to the rest of the backcountry.

Clear Creek Use-area: This area includes the Clear Creek drainage and the area on the Tonto Plateau from Sumner Wash to Clear Creek. Camping will be at-large in this area. In the Clear Creek drainage, camping is restricted to areas north of the first major side canyon entering from the east, up from the river. Camping on the Colorado River beach just to the east of the confluence of Clear Creek and the Colorado River is allowed.

Transept, Manzanita, Uncle Jim Point Use-areas: Camping is not allowed in these areas due to available camping in the Corridor campgrounds, the special ecological nature of these areas, and their low physical carrying capacities.

Hermit/Monument Use-areas: Because of their accessibility, a high demand exists for use in these areas. The potential for high level of use will be maintained. Environmental and sociological impacts will be mitigated through the designation of campsites and the installation of nonpermanent toilets at Hermit Creek, Hermit Rapids, Monument Creek, Granite Rapids, Cedar Springs, Salt Creek, and Horn Creek. Camping in the Hermit/Monument Use-areas is restricted to these campsites.

Horseshoe Mesa Use-area: This area also has relatively easy access, high historical use, and with the exception of potential impacts to fragile cultural resources, can withstand continued high use levels. Limiting factors in this area are adequate human waste disposal and protection of cultural resources. Camping will be restricted to designated campsites located away from cultural resources. Nonpermanent toilets are provided.

The Basin Use-area: This is an ecologically sensitive North Rim area restricted to day use only.

Tapeats Use-area: Although this area is remote and access from the rim is difficult, it is visited frequently by river parties during the summer season. Camping use is restricted to two sites, Upper and Lower Tapeats campsites.

2. Corridor Camping. The Cross-canyon Corridor is that area of the backcountry including and immediately adjacent to the Bright Angel and Kaibab Trails. The Corridor is managed as a developed area and is characterized by trails maintained to safe standards for stock use, permanent structures, and the potential for constant visitor contact. Indian Gardens, Bright Angel, and Cottonwood are designated campgrounds in the Corridor. Within this use-area camping is not allowed outside campgrounds.

While in operation each campground will have adequate sanitary facilities, purified drinking water, picnic tables, emergency telephones, ranger stations manned 24 hours a day, and structured interpretive activities. No additional campgrounds will be developed in the Corridor. Group sites will be established within each campground. Use limits will remain at specified levels unless the park is unable to provide the services just listed or unless the resources monitoring program demonstrates that use levels are causing unacceptable resource deterioration. (Refer to Operating Procedure A for specific use levels.)

3. River Beach Camping. Three types of camping are allowed on Colorado River beaches; commercial river trips, noncommercial river trips, and overnight hikers not associated with river trips. Participants in river trips must comply with the operational requirements set forth in the Colorado River Management Plan. All other backcountry hikers camping on Colorado River beaches will comply with the established limits and regulations for the use-area in which the beach is located, the park permit system, and other stipulations of the plan.
4. Designated Campsites. Designated campsites will be established when necessary to restrict intensive visitor use to previously disturbed areas capable of withstanding the impact. Separate designated campsites may be located in threshold zones with the sites located according to esthetic, environmental, and sociological criteria. When designated campsites are located in a threshold or developed zone, users will not be free to select other campsites. Designated campgrounds (composed of several adjacent campsites) will be established only in the developed zone. No designated campsites or campgrounds will be established in use-areas zoned as primitive or undeveloped. (See Operating Procedure A for area closures and designated campsites.)
5. At-large Camping. This is defined as camping in the backcountry at sites other than designated campsites or campgrounds. At-large camping is prohibited in developed zones. In threshold zones without designated campsites, as well as in primitive and undeveloped zones, parties and groups may camp anywhere within the area in conformance with low impact camping guidelines.
6. Area Closures. The Superintendent may establish limitations on the use of all or portions of a park based on carrying capacities and resource protection needs. Temporary or permanent closure of backcountry areas to visitors and/or camping may occur for the protection of park resources, for special park management activities (e.g., wildlife management, search and rescue, construction, blasting), to avoid crowding and congestion at popular attraction sites (e.g., Havasu Canyon, Thunder River Falls), in scientific study areas, for Native American religious purposes, for human safety and health purposes, and according to Arizona state law (e.g.; wildlife use of water sources).

The only area currently closed to visitation is the Hopi Salt Mines. Areas closed to camping include Dripping Springs, Miners Spring, Elves Chasm, confluence area at the Little Colorado River, and Redwall Cavern. (Refer to Operating Procedure A for a complete list of area closures.)

Before permanent closure of an area, alternatives to closure such as modifications of management practices, changes in visitor use patterns, increased visitor education efforts, etc., will be explored.

7. Campfires. No open wood or charcoal fires are permitted within the backcountry of Grand Canyon National Park except as allowed by the operational requirements for boating on the Colorado River and in certain specified areas on both rims where fire grates are located (contact the BRO for these locations). Collection of firewood is prohibited except on Colorado River beaches (following operational requirements for boating). Use of campfires may be restricted during seasons of high fire danger.
8. Sanitation. Backcountry visitors are required to carry out all litter resulting from their backcountry activities. Disposal of litter in backcountry toilets is prohibited.

In the developed zone sanitary facilities are provided at each campground and as necessary along trails to prevent esthetic impacts and to adequately protect public health. Acceptable waste disposal systems include sewage treatment plants, conventional septic tanks, composting, or dehydrating toilets. Haul-out systems involving helicopter or stock transport of waste are acceptable only as temporary measures until more efficient means are provided. Earth pit privies will not be used in the developed zone because of high visitor use levels.

In threshold zones sanitary facilities of a nonpermanent nature (composting, dehydrating or pit toilets) will be provided at camping areas if sanitation becomes an esthetic or health problem. Pit privies will not be used where use is so great that human waste in the pit is only being stock-piled. In primitive and undeveloped zones no sanitary facilities will be provided. Use will be limited to the capability of the environment to assimilate human waste. The location and design of pit toilets will follow standards and requirements of the State of Arizona and Coconino County Department of Environmental Health. All sanitary facilities will be constructed of native or rustic materials and be as unobtrusive as possible.

9. Private Stock Use. Private stock use in the backcountry must meet with Grand Canyon National Park stock use guidelines (Operating Procedure E). Below the rims, private livestock is permitted

on the Whitmore Wash Trail and in the developed zone with overnight stays allowed only at a picket area near Phantom Ranch. On the rims private livestock is permitted only on unpaved dirt roads in developed, threshold, and primitive zones. Special orientation, including written regulations and an oral briefing, will be provided to all private stock users. A Backcountry Use Permit is required for both day and overnight use of private stock in the backcountry.

10. Caving. Cave use and management in the park is guided by the park's Cave Management Plan (1980). Cave exploration is allowed by special permission through the Resources Management Division. It is not encouraged due to the extremely delicate, non-renewable nature of the cave resources. All caving activity (day use or overnight), except for access to Cave-of-the-Domes on Horseshoe Mesa, must be approved in advance through the Resources Management Division. In addition a backcountry permit is required. Permits can be obtained through the BRO. The Resources Management Division can be contacted by writing Chief, Resources Management Division, P.O. Box 129, Grand Canyon National Park, AZ 86023 or calling (602) 638-2411, extension 7751.
11. Technical Climbing. Most of the rock formations at Grand Canyon are extremely unstable, resulting in hazardous conditions due to rock fall and poor protection anchors. Many technical climbing areas are remote and only accessible by overnight hiking trips which require a Backcountry Use Permit. Due to the limited extent of this activity in the park no permit is presently required specifically for rock climbing. An optional check-in/check-out service is available through the BRO.
12. Fishing. Recreational fishing in the backcountry is permitted in accordance with all Arizona State Game and Fish Department regulations, and with any special regulations established by the park.
13. Commercial Use. A commercial operation is defined as one which conducts backcountry trip(s) for profit. All commercial operations must, prior to offering any services within the park, obtain an appropriate authorization from the Superintendent. These commercial authorizations will be issued consistent with all National Park Service policies, as well as the applicable provisions of Public Law 89-249, The Concessions Policy Act of October 9, 1965. All commercial operations must comply with the backcountry permit system.

Guided hiking for commercial profit may be offered in all backcountry areas where visitation is allowed. Special restrictions apply to commercial use in the Cross-canyon Corridor during the period March 1 through September 30 each year. Refer to Operating Procedure D for specific limitations. There currently exists within the park an authorized guided hike and hiking/camping equipment rental concessioner. Additional commercial guided

hiking activities will be authorized by Commercial Use License only. The expansion of any commercial backcountry operation will require appropriate environmental clearance and the written approval of the Superintendent. Such use will be documented, and expansion will be based upon that need.

Commercial stock use is limited to the Whitmore Wash Trail, the Bright Angel Trail, North and South Kaibab Trails, the stock trail from Moqui Lodge to Duck-on-a-Rock overlook, and the North Rim stock trail. All wranglers must possess a current standard first aid card. The National Park Service will provide, upon request, interpretive and first aid training for all concession wranglers conducting guided mule trips. Commercial operators may be responsible for cleaning, draining, and upkeep of trails. Concessioners are responsible for corrals and out-buildings that they use so that feces, urine, or food storage do not create a health hazard, wildlife problem or unacceptable esthetic impact.

The Colorado River Management Plan will govern concessioners who operate commercial river tours. (Refer to Operating Procedure D for the backcountry commercial use policy.)

14. Extended Hikes. An extended hike is defined as one which lasts longer than seven consecutive nights. A detailed trip plan including dates, routes, campsites, number of persons, and resupply information may be requested by the BRO before a permit is issued for an extended hike. Air drops of supplies are not permitted. Food caches may be placed before an extended hike begins and must be removed within a reasonable time after the trip. Hikes for the placement of caches or for resupply must meet all backcountry use policies and regulations. Resupply by a river company is permitted.
15. North Rim Winter Use. During the winter season (approximately October 15 through May 31) the access road to the North Rim from Jacob Lake is closed to vehicular traffic. Water, facilities, and overnight accommodations are not available. During this time and longer if trail conditions warrant, use of the North Rim from the park boundary to Roaring Springs, including use of the North Kaibab Trail, is by backcountry use permit only. Application must be made through the BRO. Persons who ski in to the North Rim from Jacob Lake (43 miles) are allowed to snow camp at-large north of the North Kaibab trailhead.
16. Day Use. At this time no restrictions exist on the number of day hikers who may enter the canyon. Through the use of interpretive handouts and trailhead signs, potential day hikers will be informed of trail distance and safety precautions. Day use in a given area may be modified for resources protection.
17. Motorized Vehicle Use. Motorized land vehicles are prohibited except where designated and for administrative purposes including search and rescue, as well as trail and facility maintenance.

Motorized boats are allowed on the Colorado River in Grand Canyon under the guidelines of the Colorado River Management Plan. Presently, motorized land vehicles are permitted on the rims only on roads designated for such use through signing.

18. Scientific Research and Collection. Scientific research conducted by persons or organizations, other than work contracted or conducted by the National Park Service, is guided by Grand Canyon policy on scientific research, collecting, and research river trips. All independent research and collecting is by permit only (available through Resources Management Division). Overnight use of the backcountry for scientific research purposes will be allocated through application to the BRO and at the discretion of the Superintendent.
19. Pets. Pets are not permitted overnight anywhere in the backcountry nor are they allowed below the canyon rims or in any undeveloped zones on either rim. In other backcountry rim zones pets are allowed only on backcountry roads and must be under physical restraint at all times. In rim developed areas (not backcountry) pets must be under physical restraint at all times and may be taken on trails and roads and other outdoor areas. Kennel facilities are available on the South Rim. For information contact Grand Canyon National Park Lodges, Grand Canyon, AZ 86023.
20. River Crossing. River crossings are dangerous and not recommended due to the Colorado River's cold temperatures, swift currents, and large rapids. If a crossing is necessary, it is recommended that a passing river trip be hailed to accomplish the crossing safely. Floating down river is not permitted. You must cross the river directly and walk along beaches.

- G. Permit and Reservation System: The permit system is designed to regulate, distribute, and measure backcountry use. Regulation of backcountry use is essential for the protection of park resources and to ensure that a variety of backcountry experiences is available to the visitor. The permit system also provides basic information about the extent and intensity of backcountry use.

The permit system administered through the BRO applies to all overnight use in the backcountry, including overnight hiking, overnight cross-country ski trips, and off-river overnight hikes done by river trip members, Colorado River beach camping by backpackers, both day and overnight use of private livestock in the backcountry, and all caving activity except entrance into Cave of the Domes.

In order to meet the tremendous demand for backcountry camping permits equitably, a reservation system has been established. (Refer to Operating Procedure C for permit and reservation system guidelines.)

- H. Management Activities, Responsibilities and Coordination. Although all park divisions have responsibility in backcountry management, major responsibility rests with Visitor Activities, Resources Management, and Maintenance Divisions. For successful backcountry management, coordination between Canyon District operations and the activities conducted by Maintenance and Resources Management must be maintained. To facilitate and ensure interdivisional coordination and communication the plan requires that the Canyon District Ranger be informed of any construction, rehabilitation, or trail work activities intended for backcountry areas. Specifically, the Canyon District Ranger will be informed by the appropriate Maintenance, Concessions, or Resources Management staff member of potential esthetic, visitor use and safety, and resource impacts which may result from the proposed activity.

Visitor Activities: The Chief Ranger is responsible for the ongoing management of visitor use in the backcountry. This includes law enforcement, visitor education, some maintenance, and all protection functions including, search and rescue, wildland fire suppression, signing (except sign construction) and emergency medical response. In most cases rangers will carry out resources management activities which have been planned and are directed by the Resources Management Division. The Chief Ranger is responsible for making recommendations for the update and revision of the Backcountry Plan.

All backcountry emergency operations are guided by the Grand Canyon emergency operations plan for search and rescue, structural fire, wildlands fire, and law enforcement. The district rangers will be directly responsible for initial coordination and implementation of all emergency operations.

Resources Management: The Resources Management Division is responsible for the design and direction of resources management programs within the backcountry. The Resources Management Division will act in an advisory capacity on matters such as environmental compliance, site rehabilitation and restoration, wildlife management, cultural resource preservation, and the establishment of backcountry use limits. This division will oversee the Backcountry Plan's monitoring and research program, assuring that the intent of the program is carried out. It is also responsible for the organization, analysis, and effective application of monitoring results.

Maintenance: Backcountry maintenance is a shared responsibility between the Chief of Maintenance and the Chief Ranger. Specifically, the Chief of Maintenance is responsible for maintaining all structures, utilities, pipelines, and trails; for sign construction; and for the operation of waste disposal systems. The Chief Ranger is responsible for campsite maintenance, sign maintenance and minor trail maintenance. The Chief Ranger will evaluate structures, facilities, and trails and will recommend improvements or possible changes to the Chief of Maintenance.

Aircraft Use: Due to increases experienced over the last 10 years in backcountry hiker use within the park and aircraft use over the park,

the National Park Service has become aware of potential conflicts between these two user groups. The National Park Service is currently reviewing overflights by military craft, private operators, major commercial airline carriers and air tour operators, as well as administrative use. Current data collection programs include a sociological study in visitor perceptions of aircraft use and a noise frequency/level monitoring study. This study will be ongoing over the next few years. Based upon the analysis results of this study an aircraft management plan may be in order.

I. Trail Maintenance Guidelines.

Management objectives for trails are to: (1) give high priority to maintenance and reconstruction, (2) establish trail classification and maintenance standards, (3) classify all trails and routes within the park according to these standards, and (4) maintain all trails to these standards. The primary problems of the existing trail system are the combined loss of tread resulting from intense mule use of the Corridor trails, inadequate maintenance, frequent rock and mud slides, short cutting, and multiple trailing in heavy use areas.

Park trail classification and maintenance standards will be recommended by the Trails Foreman and Canyon District Ranger and approved by the Superintendent. The Chief of Maintenance, Trails Foreman, and Canyon District Ranger will then determine the amount of maintenance and reconstruction required to bring trails up to standard.

The Chief Ranger and Chief of Maintenance will evaluate and coordinate trail construction and maintenance activities within their respective divisions. The Chief of Maintenance, through the Trails Foreman, will be responsible for determining costs, setting priorities and implementing the trail construction and maintenance program.

In 1981, the Bright Angel and North and South Kaibab Trails were designated as part of the National Trails System. These trails are within the developed zone of the Cross-canyon Corridor and are maintained at frequent intervals to a level allowing for safe stock and foot travel.

Other inner-canyon access trails including the Hermit, Grandview, Hance, South Bass, and Boucher provide access for a large number of backcountry hikers outside the Cross-canyon Corridor. More than 20,000 day hikers and 8,000 overnight hikers per year use the Hermit, Hance, and Grandview Trails. To prevent the collapse and loss of sections of these trails and a subsequent restriction to visitor access, to maintain their historic and esthetic character, to minimize the hazard to hiker travel and to prevent environmental damage, sections of these trails will be restored and stabilized as funding allows. Waterbars and drainage canals on these trails may also be maintained to prevent accelerated erosion and structural failure.

Additional access trails including the Tanner, Nankoweap, and Thunder River Trails and other more rugged routes into the canyon may at

times require route definition, emergency stabilization or reconstruction to provide for safer travel and to reduce the environmental damage of multiple trailing. Work on these trails and routes will be restricted to the minimal amount of upgrading necessary to achieve objectives.

J. Patrols, Staffing, and Training.

Successful implementation of the Backcountry Management Plan requires visitor education, enforcement of regulations, and monitoring of visitor activities. Regular patrols will be scheduled for all backcountry areas. Frequency will depend on the amount of use in the area. Developed and threshold zones will be patrolled regularly during the peak use periods and frequently during other seasons. Patrols in all other use-areas will coincide with seasons of high use and identified problems.

Compliance with backcountry regulations will be achieved primarily through education and orientation efforts presented before the user enters the backcountry. All backcountry law enforcement contacts will be initiated at the lowest enforcement level possible and will be escalated only as each specific situation warrants. However, a strict enforcement policy will be used to obtain the highest degree of compliance with regulations (Trail Patrol Procedures; Operating Procedures B).

Adequate visitor and resources protection activities depend upon an adequate patrol staff and adequate training of all backcountry ranger personnel. Training for seasonal rangers will be scheduled at the start of the peak use period (early spring and fall). Emphasis will be placed on the skills involved in low impact camping, law enforcement, concession monitoring, search and rescue, interpretation, resources management, advanced first aid, wildland fire control, and physical conditioning. An overnight field training workshop will be scheduled during the training session.

K. Information, Hiker Education, and Orientation: The BRO has the responsibility to educate and orient potential hikers to elements of the Backcountry Management Plan, including the following: ease of access in the zone and area to be visited by the hiker, potential for amount of party/party contact, and type of facilities in the area. Overnight backcountry hikers will receive written information and a presentation on low impact camping and safety. Backcountry patrol rangers will give educational talks as necessary to promote visitor safety and resources protection.

Interpretative programs and signs will be restricted to the developed zones. Formal interpretive programs will be presented in the developed zone to enhance visitor understanding and appreciation of the Grand Canyon. All programs will be developed by or presented in cooperation with the Interpretive Division. Informal interpretation may be provided in other use-areas as the need arises.

L. Environmental Protection, Monitoring, and Research.

Cultural and Historic Resources: Sites in danger of disturbance by the inadvertant or deliberate activities of backcountry hikers are located throughout the backcountry. Many archeological and historic sites in the backcountry are subject to heavy visitation and will be monitored, evaluated, stabilized, and protected as necessary to preserve their values in compliance with mandates of the National Historic Preservation Act. Regular inspection of sites may show that active preservation or data recovery measures (stabilization or emergency excavation) may be necessary. Refer to the Natural and Cultural Resources Management Plan, Grand Canyon National Park, for specific actions regarding archeological and historic resources in Grand Canyons backcountry.

Wildlife Protection and Management: In some backcountry areas visitor use activities will change the behavior, population levels and species diversity of canyon wildlife. The magnitude and significance of these impacts will be addressed by the plan's research and monitoring program.

Additional actions in the backcountry regarding park wildlife resources, including threatened, endangered, and rare species, are detailed in the park's Resources Management Plan. Whenever possible, mitigating measures such as changes in visitor use patterns, interpretation, wildlife relocation, etc., will be employed as an alternative to the direct reduction of any native wildlife species. Human use in some backcountry areas may be restricted to prevent impacts to sensitive wildlife species such as the peregrine falcon or bighorn sheep.

Water Quality: The potential exists for localized contamination of backcountry water sources from human waste disposal and from natural causes. A Water Resources Management Plan is being developed which will guide water quality monitoring in the backcountry. If pollutants are detected which are the result of human activity, action will be taken to eliminate the cause of contamination. Minimum Impact Camping Procedures are intended to prevent hazards to human health and the environment by ensuring the proper use of soaps and detergents, disposal of human waste, and purification of drinking water in the backcountry.

Whenever possible any human-caused water contamination will be reduced to maintain bacteria levels below primary contact standards. It is possible that water quality contamination may increase in the developed and threshold zones. In the event that this occurs, sanitary facilities may be provided in certain campsites and day-use areas.

No contaminated effluent resulting from human use or development will be allowed to enter any backcountry watershed.

Monitoring and Research. The backcountry resources monitoring program will concentrate on human use and its interrelationship with the ecosystem. This program will provide information upon which to base management decisions. Through the implementation of a monitoring and research program which addresses the following questions, management

will be better able to provide for both visitor use of the backcountry and backcountry resources protection:

- What is the relationship between levels and patterns of visitor use and impacts upon native vegetation and wildlife, soils, water resources, and cultural resources. How does visitor use relate to trail damage and erosion, campsite proliferation, and other specified parameters within the backcountry?
- What is the relationship between visitor satisfaction and levels of use, type of use (stock use, day use, etc.), use distribution, visitor behavior, resources conditions (including esthetics), and management actions (regulations, use limits, patrols, developments, etc.)?
- How is the backcountry experience affected by patterns, types, amount and flight altitudes of private, air tour and NPS aircraft use over the park's backcountry?
- What is the number, condition, and distribution of campsites in the backcountry? What is the potential for additional suitable backcountry campsites based on environmental, esthetic, and sociologically sound criteria (e.g., level ground, privacy, distance from water, shade, access, etc.)?
- What is the effect on park resources of management actions including site rehabilitation, trail work, use limits, campsite designation, and zoning?
- What effect do activities occurring outside park boundaries, such as mining and proposed airport expansion, have on backcountry resources and visitor use?
- Are the classification standards which are set for the backcountry use-areas being maintained?

The results of the monitoring program will be incorporated into the Backcountry Management Plan through the annual plan review.

The Resources Monitoring Program must be simple, efficient, and cost effective. It is anticipated that the bulk of the program's field work will be accomplished by Canyon District rangers in cooperation with the Resources Management Division.

Recommended Research. The Grand Canyon National Park Natural and Cultural Resources Management Plan (1982) identifies several research projects relating to backcountry management, including the Desert Bighorn Sheep Population and Ecology Study, Identification of Threatened/Endangered Plant Habitats, Status and Ecology of Peregrine Falcon and Golden Eagle Populations, Predatory Mammal Studies, Resources Base Inventory-Soils Inventory, Aircraft Noise Sociological Study, and the Backcountry Carrying Capacity-Impact Study. The soils inventory will aid in management assessment of campsite suitability. The results of plant and animal research will provide information for more effective protection of sensitive species within the park. An aircraft noise study will identify the impact of this type of use on the backcountry

visitor. The Backcountry Carrying Capacity-Impact Study will assist in correlating public use with physical impacts on the backcountry resource, and in turn, will assist in adjustment of use-area levels.

The following research is recommended in addition to projects identified in the Resources Management Plan. Sociological research should be undertaken to: (1) evaluate the success of the backcountry permit system based on certain parameters reflecting visitor acceptance and administrative effectiveness; (2) determine the optimum interpretive method for increasing backcountry users knowledge of low impact camping procedures and; (3) provide park managers with a better understanding of the public they serve by generating information regarding visitor characteristics, preferences and attitudes.

A study of backcountry user permit compliance is necessary to determine amount and location of noncompliance, to set effective patrol levels, and to measure the success of information and interpretive programs. Types of noncompliance to be measured include failure to obtain permit, camping at-large in zones with designated campsites, and where and how often persons are off itinerary. This information will be used in conjunction with statistics compiled by the BRO to determine specific area and site use levels and in modifying area use limits to more accurately reflect actual patterns of backcountry use and thus maintain the standards of zone classification.

- M. Plan Review and Update. The life of the plan is anticipated to be at least five years. Plan review will take place on an annual basis after the effective date of the Plan of October 1, 1983, and will include a meeting open to the public. Crucial elements of the plan for review include: zone classification standards as compared with actual field conditions; the necessity of site rehabilitation or closure; the backcountry reservation system; appropriate adjustments in area use levels; the accomplishment of identified responsibilities; the success of park division interface and communication; the effectiveness of on-going research and monitoring; public reaction and comment; and the adequacy of current levels of backcountry staffing and patrols. The Superintendent is responsible for directing the annual review.

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Operating Procedure A

Area Use Limits and Zoning

Map Number	Use- area	Mgmt. Zone*	Party Limit	Group Limit	Type Camping**
1	Badger	Prim.	1	1	A/L
2	Rider	Prim.	1	1	A/L
3	South Canyon	Prim.	1	1	A/L
4	Saddle Canyon	Prim.	1	1	A/L
5	Nankoweap	Prim.	2	1	A/L
6	Chuar	Undev.	2	or 1	A/L
7	Unkar	Undev.	2	or 1	A/L
8	Vishnu	Undev.	2	or 1	A/L
9	Cheyava	Undev.	2	or 1	A/L
10	Clear Creek	Thresh.	3	1	A/L
11	Manzanita	Thresh.		Day Use Only	
12	Greenland Spring	Undev.	2	or 1	A/L
13	Uncle Jim Point	Thresh.		Day Use Only	
14	Transept	Thresh.		Day Use Only	
15	Phantom Creek	Undev.	2	or 1	A/L
16	Trinity	Undev.	2	or 1	A/L
17	Scorpion Ridge	Undev.	2	or 1	A/L
18	North Bass	Prim.	1	1	A/L
19	Powell Plateau	Prim.	2	1	A/L
20	Blacktail	Undev.	2	or 1	A/L
21	Tapeats Amphitheatre	Undev.	2	or 1	A/L
22	Tapeats	Thresh.			
	-Upper		2	1	D/S
	-Lower		1	1	D/S
23	Surprise Valley	Prim.	1	1	A/L
24	Deer Creek	Prim.	1	1	A/L
25	Esplanade	Prim.	2	1	A/L
26	Fishtail	Undev.	2	or 1	A/L
27	Kanab Creek	Prim.	2	1	A/L
28	Boysag	Undev.	2	or 1	A/L
29	The Dome	Prim.	2	or 1	A/L
30	Whitmore	Thresh.	1	1	A/L
31	Parashant	Undev.	2	or 1	A/L
32	Trail Canyon	Undev.	2	or 1	A/L
33	Diamond Creek	Undev.	2	or 1	A/L
34	Separation	Undev.	2	or 1	A/L
35	Surprise	Undev.	2	or 1	A/L
36	Burnt Point	Undev.	2	or 1	A/L
37	Snap Point	Prim.	2	or 1	A/L
38	Grand Wash Cliffs	Prim.	2	or 1	A/L
39	Palisades	Prim.	2	1	A/L
40	Tanner	Prim.	3	1	A/L
41	Cardenas	Prim.	2	1	A/L
42	Red Canyon	Prim.	2	1	A/L

Map Number	Use- area	Mgmt. Zone*	Party Limit	Group Limit	Max. No. Campers Per Night	Type Camping**
43	Hance Creek	Prim.	2	1		A/L
44	Horseshoe Mesa	Thresh.	3	2		D/S
45	Cottonwood Creek	Prim.	2	1		A/L
46	Grapevine	Prim.	2	1		A/L
47	Cremation	Prim.	2	1		A/L
48	Corridor	Dev.				
	-Indian Gardens		15	1	50	D/S
	-Bright Angel		31	2	90	D/S
	-Cottonwood		13	1	40	D/S
49	Monument	Thresh.				
	-Monument Creek		3	1		D/S
	-Granite Rapids		2	1		D/S
	-Cedar Spring		1	0		D/S
	-Salt		1	0		D/S
	-Horn		1	0		D/S
50	Hermit	Thresh.				
	-Hermit Creek		2	1		D/S
	-Hermit Rapids		1	1		D/S
51	Boucher	Prim.	3	1		A/L
52	Slate	Prim.	2	1		A/L
53	Ruby	Prim.	2	1		A/L
54	South Bass	Prim.	1	1		A/L
55	Garnet	Prim.	2	1		A/L
56	Fossil	Undev.	2	or 1		A/L
57	Olo	Undev.	2	or 1		A/L
58	National	Undev.	2	or 1		A/L
59	Walhalla Plateau	Prim.	4	1		A/L
60	Thompson Canyon	Prim.	4	1		A/L
61	Robbers Roost	Prim.	3	1		A/L
62	The Basin	Thresh.		Day Use Only		
63	Widforss	Thresh.	2	1		A/L
64	Outlet	Prim.	2	1		A/L
65	Point Sublime	Thresh.	2	2		A/L
66	Swamp Ridge	Prim.	4	1		A/L
67	Kanab Point	Prim.	3	1		A/L
68	Tuckup Point	Prim.	3	1		A/L
69	Toroweap Valley	Thresh.	2	1		A/L
70	Cape Solitude	Prim.	2	1		A/L
71	Cedar Mountain	Thresh.	2	2		A/L
72	Tusayan	Thresh.		Day Use Only		
73	Long Jim	Thresh.		Day Use Only		
74	Pasture Wash	Thresh.	3	2		A/L

*Dev. = Developed Zone
Thresh. = Threshold Zone
Prim. = Primitive Zone
Undev. = Undeveloped Zone

**A/L = At-Large Camping
D/S = Designated Site

Length of Stay. Camping is limited to 7 nights per use-area per trip. The overall trip length (both in number of days and miles) is not limited. No camping location in designated campsites or campgrounds may be occupied for more than two nights per trip.

Area Closures. The following areas are closed to all camping, but are open to day use:

Redwall Cavern - High day use area. No feasible areas for human waste disposal.

River Mile 47 (Saddle Canyon within the Redwall Formation) - High day use area. Riparian zone with no campsites available away from sensitive vegetation.

Little Colorado/Colorado River Confluence - No camping within one mile of the confluence on the east side of the Colorado River. High day use area. Documented habitat of an endangered species.

Phantom Creek and Haunted Canyon below the 3600 foot contour - Narrow canyons with sensitive riparian vegetation. No campsites available more than 50 feet from water and no suitable waste disposal sites.

Elves Chasm - High day use area. Limited and sensitive riparian vegetation and travertine formations. No suitable waste disposal sites.

Thunder River Drainage from Surprise Valley to confluence with Tapeats Creek - High day use area. Steep slope and absence of campsites more than 50 feet from water. Lack of suitable waste disposal sites.

Havas Creek within Grand Canyon National Park - High day use area.

Matkatamiba Canyon below Redwall Formation - High day use area, sensitive riparian resources, lack of adequate waste disposal.

Grandview Historic Mining District - Cultural resource area.

Dripping Springs - Day use area with suitable camping nearby on the rim and near Hermit Creek.

Clear Creek drainage from the Colorado River north to the first major side canyon entering from the east - Absence of campsites more than 50 feet from water. No suitable waste disposal sites.

Miner's Spring - Suitable camping areas available on Horseshoe Mesa and near Hance Creek.

Deer Creek, from Colorado River to upper end of narrows - Lack of suitable campsites, heavy day use.

The Hopi Salt Mines along the Colorado River are closed to all visitation (except by permission from the Hopi Tribe).

This closure extends from approximately river mile 62 to river mile 62.5 on the rivers south side. This is a Hopi cultural site and fragile resource.

OPERATING PROCEDURE B

Trail Patrol Procedures

RESPONSIBILITY OF TRAIL PATROL

- A. Contact With Visitors. Patrolmen should attempt verbal contact with every visitor encountered on the trail. Contacts should be friendly and helpful in nature, with the primary objective being information, education, and the prevention of violations.

If the visitors are obviously geared for an overnight trip (i.e., foam pad, sleeping bag, tent, etc.), engage them in conversation, ask them how they like that brand of sleeping bag, tent, pack, etc. Was it cold, wet, etc., last night? Where did they camp? Where are they headed? Ask them what they think of the trails, campsites, signing, etc., and if there is anything we can do to improve their camping experience. Answer any questions they have and ensure that the visitor is thoroughly familiar with minimum impact camping guidelines.

If they have fishing gear check their license and make sure they are aware of the limits and regulations.

Before breaking off the contact, inspect their backcountry permit. READ IT. After the contact, you should record last name, number in party and their scheduled camp for permit compliance check and SAR purposes.

- B. Backcountry Litter. A small trash bag must be a permanent extension of your arm while on trail patrol. Pick up all visible litter, including cigarette butts, found along the trail. Constant attention to this chore will keep the backcountry clean and set a good example for the visitor. Document pounds of litter collected and location on Backcountry Patrol Log.
- C. General Trail Maintenance. Patrolmen should remove loose rocks which have rolled onto the trail tread. Report major rock slides, trail washouts, and note areas of accelerated erosion and multiple trailing on the Backcountry Patrol Log form. Minor trail redefinition and clearing can be performed if it does not require the movement of rock or living plant material from nearby areas. Discuss with your supervisor any site rehabilitation or trail rerouting you feel is necessary. A work plan can be developed and the level of environmental compliance or documentation can be determined.
- D. Signs. Patrolmen are responsible for maintaining backcountry signs in accordance with the backcountry sign standards. Problems which should be corrected upon observance are loose signs, loose posts, and signs which have been pulled out of the ground or turned in the wrong direction.

Problems which should be recorded on your Backcountry Patrol Log form are stolen or vandalized signs, signs that are poorly worded or misleading, and signs which do not conform to standard.

- E. Illegal Campsite Detection. The smell of smoke may be the first clue of an illegal camp. Use high points to scan drainages and beaches. Be alert for wisps of smoke. Look for evidence of people leaving the trail or coming onto the trail from non-designated camping areas. Follow up on arrows scratched in the trail or cairns with notes attached. After a while you will be familiar with areas where illegal camping commonly occurs, and these should be routinely checked.
- F. Fire Ring Obliteration. Patrolmen will eradicate and scarify any campfire remains that are found. Scatter the rocks so they cannot be recovered to rebuild the ring. If possible, the rocks should be placed in their original depression, with the burn marks not visible. In some instances they can be placed into a nearby stream or river where the burn mark will be washed from the rocks. Charred logs should be carried well away from the use area, or, if on a beach, placed in the river. Charcoal should be collected in a plastic bag and either scattered well away from use areas or carried out. All trash and tinfoil must be removed from the charcoal and ash before scattering. The fire-scarred ground should be spaded and the remaining ash mixed with the soil. This will hasten plant invasion. Patrol rangers will carry a small trowel or spade while on patrol. Document number and location of firepits cleaned on the Backcountry Patrol Log.
- G. Law Enforcement. Each patrolman will undoubtedly encounter violations of park regulations while in the backcountry. Action in accordance with NPS-9 and park law enforcement guidelines will be taken by the patrolman. Emphasis of the contact will be placed on educating the violator. There are no set guidelines concerning what level of enforcement is necessary, however, the patrolmen should generally use the lowest possible level which will ensure compliance in the future. In remote areas of the canyon, signs and information available to the violator before he entered the canyon should be taken into account.

For the sake of consistency within the inner canyon, recommendations for common infractions that will be encountered are:

Camping without a permit: 36 CFR 2.6b(4)
Violation notice.

Camping with a permit but off itinerary: 36 CFR 2.6b(4)
A violation notice or courtesy tag.

Fire: 36 CFR 2.12a
Violation notice.

Pets in backcountry: 36 CFR 2.8A

Violation notice.

Fishing without a valid license: 36 CFR 2.13a

Violation notice.

Fishing, limits: 36 CFR 2.13f

Violation notice.

Cutting switchbacks, rolling rocks: 36 CFR 2.20a(1) e

A violation notice or courtesy tag will be issued. If the action endangered the safety of others, a violation notice with mandatory court appearance is recommended. 36 CFR 2.7b(3)

Firearms: 36 CFR 2.11a

If the weapon is loaded, a violation notice will be issued with mandatory court appearance, a receipt for property given to the violator and the weapon held for court.

Littering: 36 CFR 2.24a

A violation notice, courtesy tag, or verbal warning will be given.

- H. Contacts with river trip parties. Patrolmen will be familiar with regulations governing river trips. If the patrolman contacts these groups in camp and violations are observed, enforcement action should be taken. In cases where the group is in violation, such as a fire without a fire pan, cite trip leader. Upon returning to the rim, inform the River Subdistrict of any action taken or of violations and concession agreement infractions which you observed.
- I. First Aid/Search and Rescue. Each patrol ranger may encounter visitors complaining of a variety of illnesses or injuries. A basic well supplied first aid kit and extra water will be carried by the patrolman. Minor injuries, such as blisters, lacerations, sprains, etc., can be dealt with in the field. Backcountry permits may be altered or extended during these times to allow the patient time to recover.

If the complaint is of a serious or life-threatening nature, contact your supervisor or the EMS Coordinator through Dispatch. These situations will be the only times helicopter evacuations may be used. Rangers with Arizona State EMT certification will report medical assessments on NACOG 1st care forms.

Mule evacuations are available from the South Rim on Corridor trails year round.

The patrolman will also receive reports of overdue or missing hikers. Generally, if the person is in good physical condition and well prepared for the weather, he will be given time to arrive on his own. The patrolman should obtain information needed for the search and rescue receiving report form and inform his supervisor of the situation.

- J. Backcountry Patrol Log. A Backcountry Patrol Log will be maintained for each day you are out on patrol. Completing the log on a daily basis will not only keep your own records updated and accurate, but it will also allow your supervisor to plan work projects for the next patrol in that area more effectively. After patrols, xerox the patrol log and send to the BRO.
- K. Wildlife Observation. Any wildlife observations you make should be in your daily patrol log. These should be transferred to a park wildlife observation card upon return to the rim and sent to Resources Management Division.
- L. Radio Procedures. Due to terrain, radio transmissions will be spotty at best. In many locations, you will not be able to get out; therefore, at the beginning of each patrol, notify Dispatch (725) either by phone or park radio of your intended route and the number of days you will be in the backcountry.

If the patrol is to be longer than 2 days in duration, you should turn your radio off, except for 1 hour each morning, at noon, and each evening to insure that your battery will last the patrol and will be available should you encounter an emergency. Ground to air radios will be issued for remote patrols where communication by park radio is impossible.

A signal mirror, a disposable radio battery, and topographic map should be carried on all patrols for use in emergency communications.

- M. Contact with Backcountry Reservations Office (BRO). For orientation purposes, each patrol ranger will work 8 hours in BRO as soon as possible after reporting for duty. Continued communication with BRO is essential, so that they can accurately inform visitors of current conditions in the backcountry. After each patrol, the ranger will update BRO with data about water sources, trail slides, or any other pertinent information which may be of use to visitors. Regarding water, make an estimate in quantity of flow, if possible.
- N. Special Projects. Before the patrol, check the BCSD black book for any special work projects to be accomplished in the area of the patrol.

DUTIES IN ESTABLISHED CAMPSITES

- A. Camper contacts. The best times to visit designated campsites are late in the day or early in the morning, while people are still in camp. Be sure to talk to the campers; usually, you will have to initiate the conversation. Take a genuine interest in their experience. Find out where they have been and what's next, if they have had any problems with the campsite or in finding the camp, if there is anything we can improve upon. Their insight might provide us with solutions to some of our problems.

- B. Campsite Maintenance. As you walk through the camping areas, pick up all visible litter. Scatter any rocks or logs which have been brought into the campsite to build shelters, make benches, or hold tents down. If you encounter campers ask them to make sure their camp is clean before they depart. This might be a good time to politely inform them of some low impact camping procedures. If campsite markers or signs are present, make sure they are securely in place in the proper position. Note general condition and location of campsites, surrounding vegetation and trails. Look for areas showing evidence of multiple trailing or soil erosion. Document this in your patrol log and discuss the necessity of rehabilitation, trail rerouting or definition with your supervisor. Any action involving the movement of rock or living plant material must be cleared with Resources Management Division to prevent damage to cultural or biological resources.
- C. Toilet Maintenance. Each time a patrolman enters a camping area which has a toilet, the facility will be cleaned. Pine oil and a scrub brush will be kept hidden nearby. Any structural maintenance on the facility will be accomplished by the field ranger.

OPERATING PROCEDURE C

BACKCOUNTRY RESERVATION AND PERMIT SYSTEM GRAND CANYON NATIONAL PARK

PERMITS, WHY AND HOW.....

Because the Grand Canyon offers an island of solitude away from the pressures of modern life, growing numbers of people are seeking out the backcountry here. In the past decade we have seen an astronomical increase in the use of the non-maintained trails. Congress has charged the National Park Service with protecting the canyon for present and future generations to enjoy. Our backcountry permit system is designed to protect both these wildlands and your solitude, both the quality of the fragile desert ecosystem and the quality of your experience. It is our attempt to enable you and others to love this wild place without loving it to death.

The Backcountry Use Permit is currently free and is required for all overnight use of the backcountry except hiking down to stay in the dorms or cabins at Phantom Ranch. Permits are not necessary for day hiking; however, day hikers must observe all other backcountry use regulations.

Advance reservations are necessary to ensure that you may hike where you want, and when you want. (Reservation system is described below.) Permits can be obtained throughout the year during office hours at the South Rim Backcountry Reservations Office (BRO), or at the Information Desk on the North Rim in the summer season (usually late May through October). North Rim permit issuance will be moved to the North Rim Ranger Station prior to the 1984 hiker season. If reservations are made, the Backcountry Use Permit must still be picked up IN PERSON at one of these two locations no earlier than the day before your hike begins. If the permit is not picked up by 9 a.m. on the day your trip begins, reservations for the entire trip are AUTOMATICALLY CANCELLED. Permits will be issued by mail only when it is unreasonable for a hiker to go to the Backcountry Reservations Office (for instance, hikes in Kanab Creek or into South Canyon). Mail-out permits require 4-5 weeks to process.

ADVANCE RESERVATION SYSTEM.....

All backcountry use-areas, campsites and campgrounds are available on an advance reservation basis. To help you plan your trip, the Backcountry Reservations Office will provide you with a Trip Planning Packet and Reservation Request Form. Contact us for these items at the address listed below.

Each use-area and designated campsite or campground is limited to a specific number of individual parties (1-8 people) and groups (9-16 people) per night. Camping in the Corridor, Hermit, Monument, Horseshoe Mesa, and Tapeats Use-areas is limited to designated campsites or campgrounds only. Camping in designated campsites or campgrounds is limited to 2 nights (consecutive or nonconsecutive) per campsite or campground per hike. These campsites must be specified on a night-by-night basis in your reservation request. Throughout the rest of the backcountry you may spend up to 7 nights in each use-area.

The overall trip length (in numbers of days or miles) is not limited.

GROUP INFORMATION AND LIMITATIONS.....

Groups are defined as hiking parties of 9-16 people. Maximum group size is 16 people. Groups with more than 16 people must divide their group between different campgrounds or use-areas. Only one group from the same organization may be in the same campground or non-Corridor use-area on the same night. No more than 3 groups from the same organization may camp within the backcountry on the same night. Group sites not reserved, or reservations for group sites not claimed by 9 a.m. the day the hike begins, will be released for use by individual hiking parties on the waiting list.

Because groups may have a greater impact on the environment and the individual hiker, only one group will be permitted per night in use-areas zoned as undeveloped. Refer to Operating Procedure A for listing of these areas.

RESERVATION REQUESTS for overnight backcountry hiking and camping are accepted BY MAIL OR IN PERSON ONLY. Beginning on October 1, reservation requests will be accepted for the remainder of the current year and for the following calendar year. For example: beginning October 1, 1983, reservation requests will be accepted for the period from October 1, 1983, through December 31, 1984; beginning on October 1, 1984, reservations will be accepted for the period from October 1, 1984, through December 31, 1985, etc. Demand for backcountry permits for the "spring break" period (March 1 - April 30), for weekends, holidays, and other vacation periods far exceeds the use limits which have been established to protect backcountry resources and the quality of your experience. As a result, many visitors will not be successful in making reservations.

Each party may submit ONLY ONE MAIL-IN REQUEST per trip and must specify (1) your name, (2) number of people in the party, (3) entry and exit points, and (4) campground, campsite, or use-area you plan to camp in each night. The listing of two alternate itineraries with this information is strongly recommended. Reservations CANNOT BE MADE without this information. You will be contacted by mail concerning the outcome of your reservation request.

TO MAKE RESERVATIONS, VISIT OR WRITE the Backcountry Reservations Office, Grand Canyon National Park, P.O. Box 129, Grand Canyon, Arizona 86023. This office is open seven days a week from 7 a.m. to 5 p.m. in summer, and 8 a.m. to 5 p.m. in winter. This office does not make reservations for campground space on the rim, for river trips, mule trips, Phantom Ranch lodging, or trips into the Havasupai Indian Reservation. Call (602) 638-2631 for Phantom Ranch lodging and mule trips. Call (602) 448-2121 for reservations within the Havasupai Indian Reservation (Havasupai Canyon).

The Backcountry Reservations Office maintains a backcountry information telephone line to answer your questions concerning availability of camping space, trip planning, trail and weather conditions, and water sources. Please note we do not accept reservation requests over the information line. The Backcountry Information Line is open from 11 a.m. to 5 p.m. Monday through Friday; call (602) 638-2474.

IF YOU ARE UNABLE TO MAKE AN ADVANCE RESERVATION.....

Persons without advance reservations may be able to obtain a Backcountry Use Permit by placing their name on a WAITING LIST FOR CANCELLATIONS at the Backcountry Reservations Office on the South Rim or the Grand Lodge Information Desk on the North Rim (summer only). Parties with advance reservations have until 9 a.m. of the first day of the hike to claim their permit on either the South or North Rim. If they do not, the entire reservation is cancelled, and the permits are given to individuals on the waiting list. The waiting list will be started when the office opens, the day before the hike would begin. For example: If you wish to start your hike on Saturday, you may place your name on the waiting list anytime between when the office opens on Friday and 9 a.m. on Saturday. This must be done IN PERSON. Hikers on the waiting list must return at 9 a.m. on the morning they plan to hike into the canyon to check on the availability of permits.

The backcountry use permit is valid only at the locations and on the dates specified. The permit itself should be attached to your pack or clothing in plain view so that it can be easily checked by Backcountry Rangers.

When the BRO is totally operational in the camper services visitor use area, office hours will be expanded in peak use season to enable hikers to get an early start on the trail. Spring and summer hours from 6 a.m. to 7 p.m. are anticipated pending adequate funding.

ARIZONA IS ON MOUNTAIN STANDARD TIME ALL YEAR.

OPERATING PROCEDURE D

BACKCOUNTRY COMMERCIAL USE POLICY

Goal. The goal for commercial use management in the backcountry is to provide at reasonable cost, a quality service for guided hikes, winter use, equipment rental, and other services which, as determined by the National Park Service to be necessary and appropriate, will enhance the park visitors' enjoyment of the backcountry resources.

Definitions

Commercial: Guided trips or services which collect a fee over and above the actual cost of the trip, from participants, for payment of other than actual expenses for guides, leaders, or managers of an organization are considered commercial trips. This may include nonprofit organizations providing a livelihood for people through provision of these services.

Noncommercial: All trips not covered under the commercial definition above, including

- a. Bonafide educational institutions (for which credit is granted)
- b. Boy Scouts/Girl Scouts
- c. Governmental entities
- d. Certain civic organizations (see note).
- e. Certain conservation organizations (see note).

NOTE: It will be considered a noncommercial trip when an instructor/leader may be receiving a salary, but not directly through fees contributed by members of the guided party.

Permit: An appropriate commercial authorization will be required for all commercial use of the backcountry. The authorization will be initiated by request through the Backcountry Reservations Office, directed by the Concessions Office, and approved by signature of the Superintendent.

All authorizations issued (other than the concession permit) will be one-time Commercial Use Licenses until such time as demonstrated demand may warrant the establishment of additional concession permits. Currently, Grand Canyon Trail Guides, P.O. Box 735, Grand Canyon, Arizona 86023, is the holder of a concession permit for the purpose of providing guided hiking and hiking/camping equipment rental services to the visiting public.

All applicants for Commercial Use License will be required to meet the following minimum qualifications prior to issuance of an authorization.

1. Proof of liability insurance coverage (Certificate of Insurance) naming the United States Government as an additional coinsured.
2. Payment of all required licensing fees.

3. Certification that all guides/leaders meet the following qualifications:
 - a. Must be 18 years old or older.
 - b. Must hold an Advanced First Aid Card.
 - c. Must have made two previous trips with a group on a trip comparable to the one that they intend to hike.
4. All licensees must assume rescue expenses that may be incurred by any member of the group.

Backcountry commercial use (Corridor and non-Corridor), including North Rim winter use, will not be limited at this time except as follows:

Commercial use in the Corridor during the period March 1 through September 30 each year will be limited to only that use which is necessary for the commercial operator to gain access to, or egress from, other non-Corridor backcountry areas.

An exception to the restriction on commercial overnight Corridor use may be made for commercially guided special populations groups (physically or otherwise handicapped). Commercial use for Corridor hikes for these groups may be granted by the Superintendent on a need basis, and then only after careful review of each request.

The National Park Service reserves the right to establish commercial user night limitations for other time periods and/or areas as future conditions may warrant. This need shall be evaluated as part of the annual review process.

Other Conditions. Qualified commercial operators will be issued one Commercial Use License at a time, with only one trip permitted per authorization.

Commercial operators must compete for Backcountry Use Permits on the same basis as noncommercial groups and parties. No special consideration or exceptions to reservation policies, campsite/use-area limits, etc., will be granted. Commercial operators (Licensees and Permittees) may have equal access to the backcountry reservation system in order to book verifiable client reservations.

OPERATING PROCEDURE E

Private Livestock Use in Grand Canyon National Park

Backcountry areas of Grand Canyon National Park are managed by the National Park Service to maintain natural ecosystem and a primitive atmosphere, while providing for compatible visitor uses. Many rim and inner canyon trails are heavily used by both hikers and concession and National Park Service mules. The use of private livestock at Grand Canyon is a relatively new, and apparently growing interest. For the purposes of backcountry use, private livestock will be defined as domesticated horses, mules, and burros that have been trained for riding or packing. No other species will be permitted. A minimum of regulations have been developed for private stock use. These are enforced, and may be altered or added to as stock use or stock-related problems increase. For more detailed information than that provided below call or write to the Backcountry Reservations Office (BRO), Grand Canyon National Park, P.O. Box 129, Grand Canyon, Arizona 86023; (602) 638-2474.

All private stock trips, including day trips, must obtain a Backcountry Use Permit, at the South Rim Backcountry Reservations Office (BRO), or the North Rim Ranger Station. All stock must have a current health certificate, issued in the owner's state of residence, and will be inspected by a park ranger for obvious health or fitness problems. Each rider by entering Grand Canyon National Park accepts responsibility for personal safety and for the removal of injured or dead stock from the park (36 CFR 2.1).

On the Rims

Cross-country stock travel is prohibited on the rims. Stock use is confined to established routes and trails in developed, threshold, and primitive zones. Paved roads and paved trails may not be used.

There are designated parking areas on both rims for stock trailers and trucks. Upon arriving in Grand Canyon National Park contact the Ranger Patrol Supervisor for direction to the parking area and your starting point. There are no facilities on either rim for overnight holding or picketing of private stock. Feeding and watering of private livestock must be done away from public use areas and away from concessioner mule facilities.

Overnight picketing of livestock may be done in the Kaibab National Forest outside the park boundary. The National Forest Service requires that:

1. you camp at least 1/2 mile from paved highways,
2. you bring your own feed (no grazing),
3. you not use developed campgrounds (e.g., Ten-X camp or Demott Park) and,
4. you abide by any special regulations such as restrictions during seasons of high fire danger.

For more information about the Kaibab National forest contact the Forest Supervisors Office, Kaibab National Forest, Williams, Arizona 86046. Phone (602) 635-2681.

Below the Rims

In the inner canyon, stock use is limited to the maintained Bright Angel, South Kaibab, North Kaibab, Plateau Point Trails, and the Whitmore Wash Trail. Stock are confined to the main trails and shall not use spur trails or foot paths. Entry of stock into campgrounds or picnic areas is prohibited.

There is an overall limit of 12 animals per party and a limit of 5 pack animals per mounted packer. Pack stock will be led, tied together, single file. Loose herding or hazing is prohibited.

No public corral facilities are available in the park. Stock must be picketed, or tied to a hitchrail when not being worked. Grazing is not permitted, and complete feed must be packed by the party. Recommended feed is 20 lbs. of pellets and 5 lbs. of grain per animal per day. Feed must be properly stored while on the trip. Spilled feed must be collected and packed out with all other trash to prevent rodent problems.

Stock can be watered directly from natural water sources only where water crosses maintained trails, such as Pipe Creek on the Lower Bright Angel Trail, and Wall Creek on the North Kaibab Trail. Buckets should be packed to carry water from other sources. Private stock may not be watered in concession or National Park Service corrals. A trough is provided at the Phantom ranch hitching area - stock parties may use it at their own risk, and must drain it upon their departure.

Concession and National Park Service mules have the right-of-way on all trails. When hikers are encountered, stock parties should ask hikers to stand quietly off to the inside of the trail while their stock passes.

The inner canyon trails (Bright Angel, South and North Kaibab) are strenuous and require stock and riders to be in very good condition, well prepared for the desert environment, and not fearful of heights. These trails average a 5,000 foot elevation change in a distance of seven to fourteen miles, with an average grade of 16 percent. Summer temperatures often exceed 110°F. Trails are rough and rocky - it is recommended that stock be shod in summer. In winter, the upper trails are normally covered with ice and snow - all stock must be shod with ice caulks or equivalent sharp shoes. Stock in good condition average about two miles per hour descending these trails, and take about twice as long for the ascent.

The Bright Angel Trail includes two short tunnels just below the rim. Water is available by bucket at Indian Gardens (4.5 miles from the rim) and below. Stock must cross the Colorado River on the upriver black Kaibab Bridge - stock is prohibited from using the downriver silver bridge. Immediately before the black bridge is a 60 foot long tunnel - riders approaching the tunnel should be watchful for hikers and stock approaching the bridge and tunnel from the opposite direction. To avoid conflicts with mule trains on the Bright Angel Trail, stock parties should travel downhill from early morning until noon, uphill before noon to Indian Gardens, and uphill after noon above Indian Gardens.

The South Kaibab Trail is consistently steep, and has no water sources. Again, stock must cross the river on the upriver Black Bridge. Stock should travel downhill after 1:00 p.m. and uphill after 9:00 a.m.

The North Kaibab Trail has one tunnel one and one half miles below the rim and has water available by bucket from Roaring Springs to Phantom Ranch. Above Roaring Springs stock should travel downhill from early morning until noon, and uphill after noon.

Overnight stops for stock parties are permitted only at Phantom Ranch, with riders staying at Bright Angel Campground or at Phantom Ranch Lodge (contact Grand Canyon National Park Lodges, Reservations Office, Grand Canyon, Arizona, 86023, (602) 638-2631 for reservations). Only one stock party is permitted per night at Phantom, and stock parties may remain no more than two nights. Facilities are primitive - stock must be tied to the hitching rail provided, all feed must be packed in, and a water trough is available. Stock parties wishing to camp at Bright Angel Campground must obtain reservations for a combined backcountry camping and overnight stock use permit from the Backcountry Reservations Office.

OPERATING PROCEDURE F

Backcountry Sign and Trail Marking Policy

The backcountry sign policy for Grand Canyon National Park will follow the guidelines delineated in the "NPS Sign System Specifications" manual. Backcountry signs will be kept to a minimum and will be no larger than necessary. Signs may be used to give directions, provide information, mark campsites and mark sanitary facilities, delineate closures for resource protection or rehabilitation and for resource management needs. Signs may be used at trail junctions to give directions only in the Cross-canyon Corridor. No directional signs will be installed at trail junctions on other trails unless specifically justified for visitor safety.

Non-Corridor trailhead signs and bulletin boards will be installed on the following trailheads, a short distance from the trailhead:

- | | |
|--------------------|-------------------------------|
| - Tanner | - South Bass |
| - New Hance | - Thunder River and Bill Hall |
| - Grandview | - North Bass |
| - Hermit | - Clear Creek |
| - Dripping Springs | - Nankoweap |
| - Waldron | - Widforss |
| - Boucher | - Uncle Jim |
| | - South Canyon |

Trailhead signs may be installed at other trailheads as needed. Trailhead signs will state trail name, that a backcountry permit is required for overnight use and that permits can be obtained at the Backcountry Reservations Office. Water availability and level of trail difficulty may also be included if specifically justified for visitor safety.

The standard backcountry sign will be unpainted wood with routed, unpainted letters. All signs will be mounted on unmilled, unpainted juniper posts. Signs will be treated with linseed oil. The posts will have a rough-cut, conical top (beaver top). No more than two signs will be mounted on one post. The bottom edge of the lowest sign will be a minimum of four feet above the ground. The top edge of the top sign will be six inches below the top of the post.

Trailhead signs for Cross-canyon Corridor trails will be white "Scotch-lite" letters on a brown background. All other Corridor trail signs will be the standard backcountry sign construction. Mileages may be included as needed.

Interpretive signs may be installed only along Corridor trails and will conform to the backcountry sign standards. Dual purpose signs are recommended where feasible in order to minimize the number of signs along the Corridor trails.

Backcountry signs will be produced by the park Sign Shop and will be installed and maintained by Backcountry Patrol Rangers.

A sign inventory will be maintained by the District Ranger responsible. This inventory will include the size, type, condition, wording, and location of each sign and post. It will also include a black and white photograph of each sign and post to aid in replacement.

Rock cairns may be used as trail markers. These cairns should be only as large as necessary to be seen against terrain features and ground cover. Cairns may be used to mark trail junctions on primitive trails.

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